

Remarks/Arguments:

The present invention relates to a video broadcast receiving apparatus for receiving time division multiplexed programs. Specifically, the operation start point of a variable gain circuit is varied to start from a low power level in response to a detected electric field strength and measured errors being above predetermined respective thresholds.

On page 3, the Official Action maintains the rejections of claims 1 and 2 based on the Todd (US 6,002,672) and Goro (JP Publication 09-148973) references. It is respectfully submitted, however, that the claims are patentable over the art of record for the reasons set forth below.

Todd teaches a diversity into the system wherein a switch is controlled to select an antenna based on the detected electric field strength and bit error rate. Goro is related to a diversity receiver wherein the average of the received electric field strength is utilized to select an antenna.

Applicants' invention as recited by claim 1, includes a feature which is neither disclosed nor suggested by the art of record, namely:

operation start point controlling circuit that varies an operation starting point of a variable gain circuit to start operation from a decreased power level which is lower than a power level used when measuring the electric field strength and errors in response to the detected electric field strength being above a predetermined electric field threshold and the measured errors in the received data packets being above a predetermined error threshold.

Claim 1 relates to a receiver with a variable gain circuit. Specifically, the operation start point in a variable gain circuit starts operation from a decreased power level in response to the detected electric field strength and measured errors being above predetermined thresholds. This feature is found in the originally filed application on page 15, lines 5-23. No new matter has been added.

In column 4, lines 3-34, Todd teaches switching between two antennas in response to received signal strength and bit error rate ("*RSSI and BER measurement in order to determine how to toggle RF switch 35 in order to select which antenna is to be used for reception*").

Column 5, lines 53-57 of Todd goes on to teach that the automatic gain control (AGC) is adjusted based on the received signal strength ("*RSSI_A value is sent to the DSP to adjust the internal DSP automatic gain control (AGC) in order to avoid bit hits which result when the maximum input level of the baseband demodulator is exceeded*"). In similar art, the abstract of Goro teaches a diversity receiver which selects an antenna based on the detected electric field strength. Todd and Goro, however, do not suggest how the operation start point of a variable gain circuit is varied. Specifically, neither Todd nor Goro nor their combination suggest varying the operation start point of a variable gain circuit to start from a decreased power level in response to the detected electric field strength and measured errors being above predetermined thresholds as recited in Applicants' claim 1 ("*varies an operation starting point of a variable gain circuit to start operation from a decreased power level which is lower than a power level used when measuring electric field strength and errors in response to the detected electric field strength being above a predetermined field threshold and the measured errors in the received data packets being above a predetermined error threshold*").

Page 15, lines 5-23 of Applicants' specification teaches that the operation start point of the variable gain circuit will be set to start from weak power in the case that the packet error ratio is worse than a predetermined value and the outputting electric field strength is large enough ("*In the case that signal F indicates packet error ratio worse than the predetermined value even when the output C of electric field strength detecting circuit 145 indicates the electric field strength large enough, it is judged that the high interference wave exists in the vicinity. Operation starting point controlling circuit 135 then adds a DC offset to an output signal of RFAGC controlling portion 132 in order to increase the strength against the interference wave so that the operation start point will be set to start operation from weak power*"). As described on page 15, lines 5-23 of the specification, the feature of amended claim 1 is important in order to protect the system against an interfering wave. For example, if an interfering wave exists in the vicinity of the receiver, the detected electric field strength will be above a predetermined threshold and the measured errors will also be above a predetermined threshold (because data is corrupted by interfering wave). Thus, the system benefits from starting the operation start point of the variable gain circuit from a decreased power level thus preventing amplification of the interfering wave.

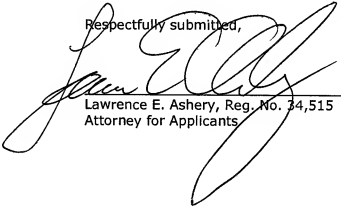
It is because Applicants include the feature of "*varies an operation start point of a variable gain circuit to start operation from a decreased power level which is lower than a power*

level used when measuring electric field strength in errors in response to the detected electric field strength being above a predetermined electric field threshold and the measured errors in the received data packets being above a predetermined error threshold", that the following advantages are achieved. An advantage is the ability to attenuate the effects of an interference wave. Accordingly, for the reasons set forth above, claim 1 is patentable over the art of record.

Claim 2 includes all of the features of claim 1 from which it depends. Thus, claim 2 is also patentable over the art of record for the reasons set forth above.

In view of the amendments and arguments set forth above, the above-identified Application is in condition for allowance which actions are respectfully requested.

Respectfully submitted,



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